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REMARKS

Claims 1-13 and 20-32 are pending in the application upon entry of the amendment and new claims. Claims 1, 8-10, 20-23 have been amended to better describe certain aspects of the invention. Claims 29-32 have been added to further describe the invention. Favorable consideration in light of the amendment, the new claims, and the remarks which follow is respectfully requested.

I. The Amendments

Independent claims 1, 10, and 23 have been amended to better describe the invention by reciting "exposing the carbon on a surface of the delaminated Chinese kaolin by pulverizing the delaminated Chinese kaolin at least two times before heating at a temperature from about 450 to about 1200°C." The amendment is supported by the specification, for example, page 14, lines 4-6 of the specification.

Independent claims 1, 10, and 23 have been also amended to better describe the invention by reciting "consuming the carbon on the surface of the at least twice pulverized Chinese kaolin by heating." The amendment is supported by the specification, for example, page 8, line 24 of the specification.

II. Obviousness Rejection over Mixon

Claims 1-9, 11-13, and 23-28 are rejected under 35 U.S.C. §103(a) over Mixon (U.S. Patent 4,246,039). Mixon relates to a more energy efficient process for making calcinated kaolin clay pigments involving forming a slurry of kaolin, spray drying the kaolin, pulverizing the kaolin, calcining the kaolin, then pulverizing the kaolin again. Applicants respectfully request withdrawal of the rejection for at least the following reasons. Mixon does not teach or suggest all the features of the claimed invention.

There are at least three key differences between Mixon and the claims of the invention. The first difference is starting material, the second difference is exposing

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carbon material in Chinese kaolin on a surface of the Chinese kaolin by pulverizing the delaminated Chinese kaolin at least two times before heating at a temperature from about 450 to about 1200°C, and the third difference is consuming the carbon on the surface of the at least twice pulverized Chinese kaolin by heating the at least twice pulverized Chinese kaolin at a temperature from about 450 to about 1200°C for a time from about 1 minute to about 10 hours or consuming the carbon on the surface of the at least twice pulverized Chinese kaolin by heating the at least twice pulverized Chinese kaolin to form at least one of metakaolin, partially calcined kaolin, and calcined kaolin.

In regards to the first difference, the Examiner contends that "the processing of Chinese kaolin is obvious because (1) one skilled in the art would have appreciated that any type of kaolin can be processed in" the manner according to *Mixon*, (2) "irrespective of what the material is called, the method of forming it is the same," and (3) "*Mixon* teaches processing of kaolin, in general and therefore this reads on and makes obvious the processing of any type kaolin clay because *Mixon* does not limit the clay to a specific type" (the Advisory Action). Applicants respectfully disagree.

With respect to the first point (1), one skilled in the art would NOT have appreciated that any type of kaolin can be processed in the manner according to *Mixon*. In this connection, a cited reference must be considered in its entirety. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). *Mixon* must therefore be considered in its entirety.

When kaolin is mined, some kaolin depending on a location at which the kaolin is mined is contaminated with organic materials such as carbon material. When kaolin contains carbon material as Chinese kaolin does, the carbon material should be removed from the kaolin to produce kaolin pigments. *Mixon* does not mention any kaolin that contains carbon material. Also *Mixon* does not mention any process to remove carbon material. When kaolin contains a significant amount of carbon material, one skilled in the art would NOT have appreciated that the kaolin practically can be processed in the manner according to *Mixon* for producing white

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calcined kaolin clay pigments due to the contaminant of carbon material. Therefore, one skilled in the art would have appreciated that kaolin processed in Mixon does not contain a significant amount of carbon material as Chinese kaolin does. Any type of kaolin can not be processed in the manner according to Mixon.

With respect to the second point (2), the method for processing kaolin of Mixon is not the same as the claimed invention. The Examiner conceded that although a multiple pulverization step is after the calcining step in Mixon, pulverizing the delaminated Chinese kaolin at least two times is done before calcining in the claims (page 5, lines 11-13 of Office Action dated October 19, 2005). The difference between Mixon process and the claimed invention will be discussed below.

With respect to the third point (3), Mixon does not teach processing of kaolin that contains carbon material contaminant. Mixon teaches "the manufacture of high brightness (white) low abrasion calcined clay pigments" (Abstract and Col. 1, lines 7-8 of Mixon). If kaolin of Mixon contains a significant amount of carbon material as Chinese kaolin does, the carbon contaminant should be removed to manufacture the high brightness (white) low abrasion calcined clay pigments. However, Mixon does not mention removing carbon material contaminants. Therefore, Mixon does teach processing of kaolin that does not contains a significant amount of carbon material contaminants. Mixon does not teach processing of such carbon material containing kaolin.

As to the second difference, Mixon does not teach or suggest (1) exposing carbon material on a surface of kaolin by pulverizing the kaolin at least two times before heating at a temperature from about 450 to about 1200°C and (2) consuming the carbon on the surface of the at least twice pulverized Chinese kaolin by heating the at least twice pulverized Chinese kaolin at a temperature from about 450 to about 1200°C for a time from about 1 minute to about 10 hours or consuming the carbon on the surface of the at least twice pulverized Chinese kaolin by heating the at least twice pulverized Chinese kaolin to form at least one of metakaolin, partially calcined kaolin, and calcined kaolin as required in the claims. As discussed above, Mixon does not mention any carbon material contaminants in kaolin processed. One

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skilled in the art would NOT have been motivated from the teaching of Mixon to employ (1) exposing carbon material on a surface of kaolin by pulverizing the kaolin at least two times before heating at a temperature from about 450 to about 1200°C and (2) consuming the carbon on the surface of the at least twice pulverized Chinese kaolin by heating the at least twice pulverized Chinese kaolin at a temperature from about 450 to about 1200°C for a time from about 1 minute to about 10 hours or consuming the carbon on the surface of the at least twice pulverized Chinese kaolin by heating the at least twice pulverized Chinese kaolin to form at least one of metakaolin, partially calcined kaolin, and calcined kaolin.

Due to the extensive differences between Mixon and the claims, and due to the fact that Mixon fails to teach or suggest all of the features of the claims, Mixon CANNOT render the claims obvious.

IV. Obviousness Rejection over Mixon/Maxwell

Claim 10 is rejected under 35 U.S.C. §103(a) over Mixon in view of Maxwell (U.S. Patent 6,238,473). Maxwell relates to applying pressure to a kaolin clay to INCREASE the bulk density. Applicants respectfully request withdrawal of the rejection for at least the following reasons. The proposed combination of Mixon and Maxwell does not teach or suggest all the features of the claimed invention.

As discussed in the previous section, Mixon does not teach or suggest all the features of the invention. In particular, Mixon does not teach or suggest 1) any kaolin that contains carbon material contaminant as Chinese kaolin contains a higher carbon content, 2) exposing carbon material on a surface of kaolin by pulverizing the kaolin at least two times before heating at a temperature from about 450 to about 1200°C, and 3) consuming the carbon on the surface of the at least twice pulverized Chinese kaolin by heating the at least twice pulverized Chinese kaolin to form at least one of metakaolin, partially calcined kaolin, and calcined kaolin or consuming the carbon on the surface of the at least twice pulverized Chinese kaolin by heating the at least twice pulverized Chinese kaolin

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at a temperature from about 450 to about 1200°C for a time from about 1 minute to about 10 hours.

Maxwell fails to make up for the aforementioned deficiencies of Mixon. Mixon and Maxwell, taken individually or combined, fail to teach or suggest all the claim features. Consequently, it would not have been obvious to one skilled in the art at the time the invention was made to look to or combine Mixon and Maxwell. In view of the foregoing, the rejection should be withdrawn.

V. Obviousness Rejection over Fanselow

Claims 20-22 are rejected under 35 U.S.C. §103(a) over Fanselow (U.S. Patent 3,586,523). Fanselow relates to hard sedimentary kaolin clay for a functional paper filler (Abstract of Fanselow).

As stated earlier, a cited reference must be considered in its entirety. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). Fanselow must therefore be considered in its entirety.

When kaolin is mined, some kaolin depending on a location at which the kaolin is mined is contaminated with organic materials such as carbon material. When kaolin contains carbon material as Chinese kaolin does, the carbon material should be removed from the kaolin to produce a functional paper filler of kaolin. Fanselow does not mention any kaolin that contains organic materials as Chinese kaolin contains a higher carbon content. Fanselow does not mention any process to remove organic materials. Therefore, one skilled in the art would have appreciated that kaolin processed in Fanselow does not contain a significant amount of carbon material as Chinese kaolin does.

The Examiner specifically points out that claim 1 of Fanselow is not limited by a source of Kaolin, and therefore the Examiner concludes that the claim broadly read includes any Kaolin including Chinese kaolin. However, claims are always interpreted and given life in light of the specification. Clearly, Fanselow only mentions hard kaolin clays and by way of example mentions kaolin from Georgia and South Carolina (col. 4, ln. 23-25). The concentration of carbon

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material contaminants in such hard kaolin clays is much lower than the concentration in Chinese kaolin. Fanselow discloses kaolin that does not need to be subjected to carbon contaminant removal process. Consequently, Fanselow does not teach or suggest Chinese kaolin as required in the claims.

In addition, the Chinese kaolin of the claims has a higher carbon content, a lower iron oxide content, and a higher propensity to release alumina upon heating compared to Middle Georgia (U.S.A.) kaolin. Even if the final product of the claims has a lower carbon content, the final product is different from other kaolin such as Middle Georgia kaolin since the final product has a lower iron oxide content and a higher propensity to release alumina upon heating compared to Middle Georgia (U.S.A.) kaolin. Fanselow does not teach or suggest such kaolin.

In view of the foregoing, claims 20-22 of the invention DO NOT read on claim 1 of Fanselow.

Petition for Extension of Time

A request for a two month extension of time is hereby made. A Credit Card charge form is enclosed herewith to pay the petition fees and the RCE Request fees.

VII. Conclusion

The present application is believed to be condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063.

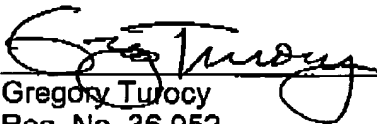
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Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicant's undersigned representative at the telephone number listed below.

Respectfully submitted,

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